#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Edwin SOUTHERN et al.

Serial No. NEW

Attn: Application Branch

Filed August 23, 2001

Attorney Docket No. 2001 1178

A METHOD FOR ANALYSING A POLYNUCLEOTIDE CONTAINING A VARIABLE SEQUENCE AND A SET OR ARRAY OF OLIGONUCLEOTIDES THEREFOR (AS AMENDED) (Rule 1.53(b) Divisional of Serial No. 09/502,778, Filed February 11, 2000)

#### **SUBMISSION OF REVISED FORMAL DRAWINGS**

Assistant Commissioner for Patents, Washington, DC 20231 Sir:

There are submitted herewith seven sheets of paper formal drawings in the above-identified application showing Figs. 1-6.

The attached drawings have been revised to correct each item objected to by the Examiner and/or the Chief Draftsman.

Kindly substitute the attached formal drawings for those of record.

Respectfully submitted, Edwin SOUTHERN et al.

By

Warren M. Cheek, Jr. Registration No. 33,367

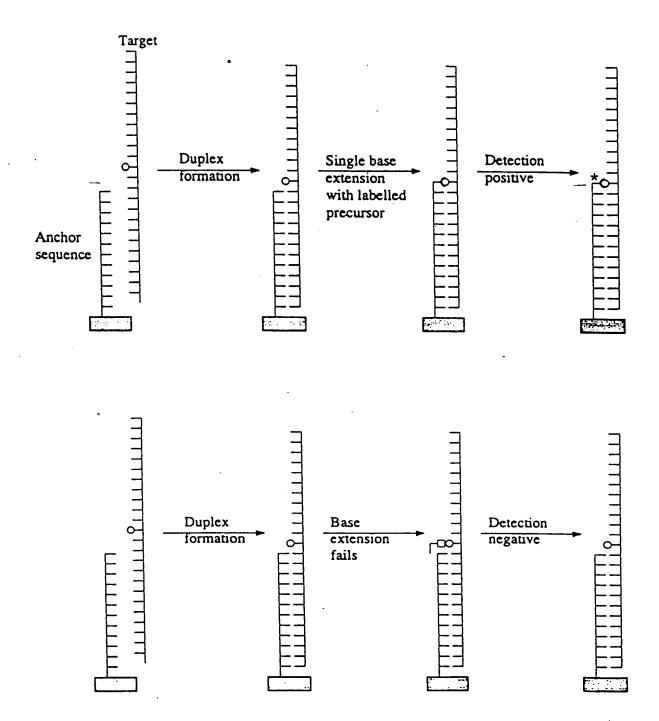
Attorney for Applicants

WMC/dlk Washington, D.C. 20006-1021 Telephone (202) 721-8200 Facsimile (202) 721-8250 August 23, 2001

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Fig.1

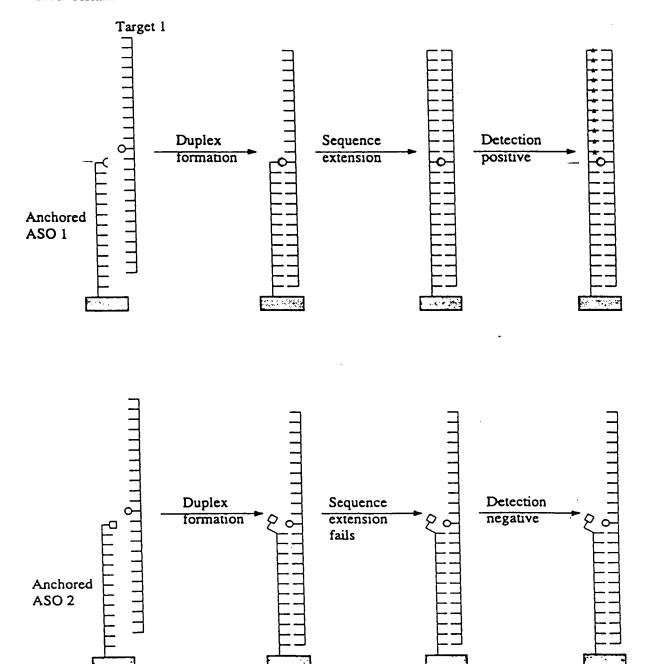
Detection of point mutation by single base extension



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Fig.2

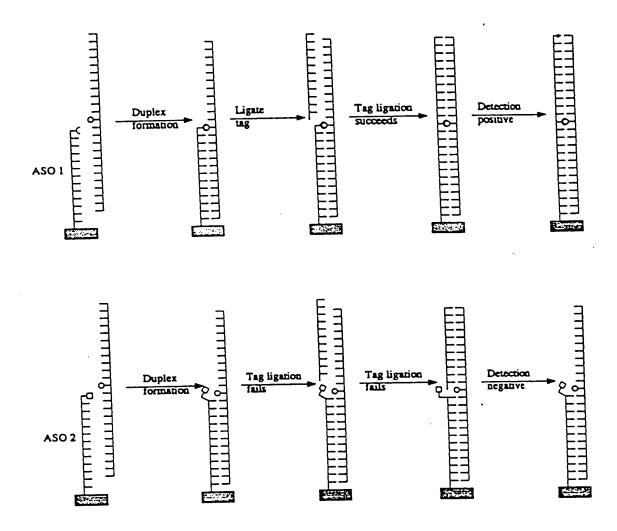
Detection of point mutation by hybridisation to ASOs and chain extension



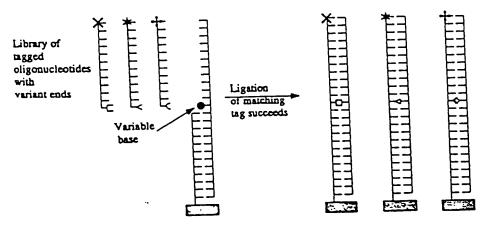
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Fig.3

A. Detection of point mutation by tag ligation to ASOs



B. Detection of point mutation by ligation to library of differentially tagged ASOs

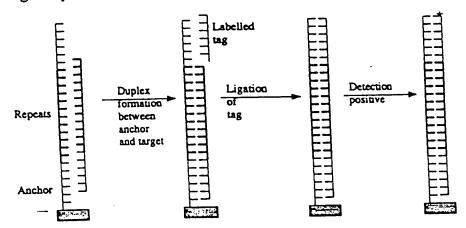


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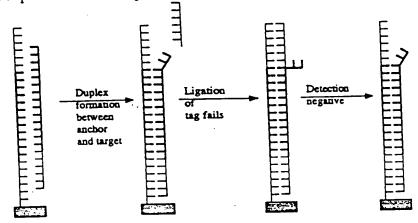
Fig.4a

## Analysis of VNTRs by ligation of tag to allelic variants

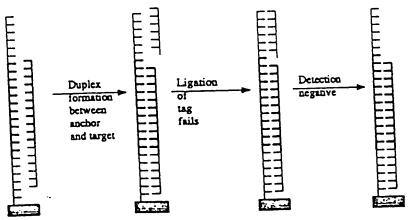
### A. Target repeats equal probe



#### B. Target repeats more than probe



#### C. Target repeats less than probe

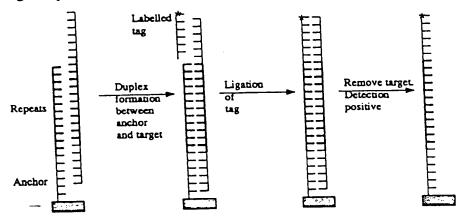


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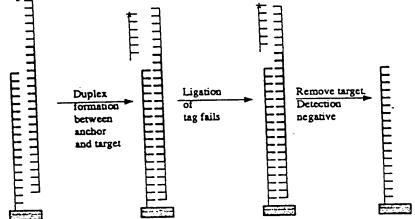
Fig.4b

## Analysis of VNTRs by ligation of tag to allelic variants

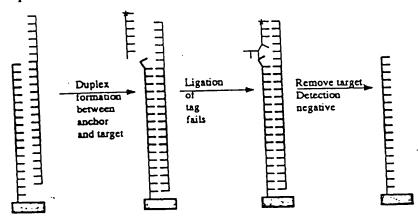
#### A. Target repeats equal probe



#### B. Target repeats more than probe



#### C. Target repeats less than probe



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Fig.5

### Measurement of VNTRs by labelled chain extension

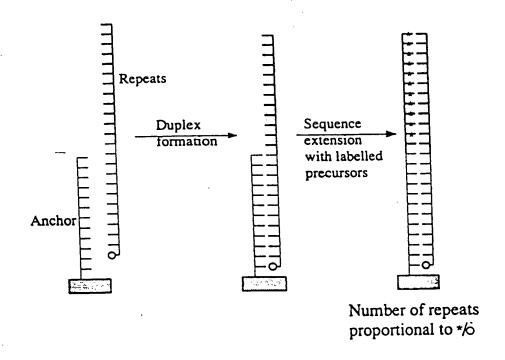
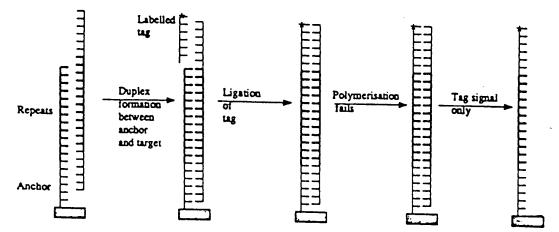


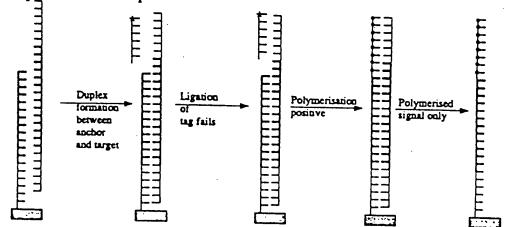
Fig.6

# Analysis of VNTRs by ligation of tag followed by chain extension

#### A. Target repeats equal probe



### B. Target repeats more than probe



#### C. Target repeats less than probe

